RETHINKING PLASTICS

How the Extended Producer Responsiblity Act will pave the way towards circularity in the Philippines

Eco-Business

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ACRONYMS

BOI	Board of Investments
CFR	Collected-For-Recycling
DENR	Department of Environment and Natural Resources
EMB	Environmental Management Bureau
EPR	Extended Producer Responsibility
ERIA	Economic Research Institute for ASEAN and East Asia
FMCG	Fast-Moving Consumer Goods
HDPE	High-Density Polyethylene
MMDA	Metropolitan Manila Development Authority
MSME	Micro, Small and Medium-sized Enterprise
MRF	Material Recovery Facility
NGO	Non-Governmental Organisation
NSWMC	National Solid Waste Management Commission
PCR	Post-Consumer Recyclate
PET	Polyethylene Terephthalate
PS	Polystyrene
PVC	Polyvinyl Chloride
RFID	Radio-Frequency Identification
RTD	Roundtable Discussion
UNEP	United Nations Environment Programme
WWF	World Wildlife Fund

FOREWORD

Kais Marzouki
Chairman and CEO
Nestlé Philippines Inc.

The implementation of the law mandating extended producer responsibility (EPR) for plastic waste stands as a momentous milestone in our ongoing battle against the plastic pollution crisis.

As we strive towards achieving a circular economy, the success of the EPR Act hinges on sustained collaboration and partnerships among various stakeholders.

At Nestlé, our purpose is to unlock the power of food to enhance the quality of life for present and future generations.

We recognise that fulfilling this purpose, in serving the best interests of our communities, requires a firm dedication to preserving our natural resources and ensuring a healthy planet.

Aligned with our commitment to environmental stewardship, we have embarked on a transformative journey of caring for and safeguarding our surroundings, with the aim, beyond sustaining, of regenerating the Earth. As a voluntary expression of our unwavering dedication to the principles of EPR, Nestlé Philippines has achieved full plastic neutrality since August 2020, the first multinational fast-moving consumer goods company in the country to do so. We have collected and diverted from the environment over 64.5 million kilograms of plastic waste as of December 2022.

The road to this achievement was not devoid of challenges. Nonetheless, driven by our vision of a future free from waste, and working closely with our partners, we are continuously striving to that vision a reality.

We firmly believe that fostering robust cooperation between the government and industry holds immense potential for effectively implementing the EPR Act and measuring its concrete impacts.

By actively engaging in shaping the future that we want, putting paramount importance on waste reduction and sustainability, we can collectively effect the change needed to better our environment, the well-being of our children, and the prosperity of generations to yet come.

Maria Antonia "Toni" Yulo-Loyzaga

Secretary, Department of Environment and Natural Resources

Waste management has become a pressing global challenge that affects public health, water security, food supply chains, climate action, and disaster risk reduction. Addressing this multifaceted issue requires collective action from all stakeholders.

Republic Act 11898, also known as the Extended Producer Responsibility (EPR) Act of 2022, is a significant step forward in promoting environmental responsibility throughout the lifecycle of products and improving waste management processes.

The EPR Act has the potential to meaningfully address our country's collection and recycling woes through various schemes.

By involving all sectors and encouraging collaboration and cooperation, the successful implementation of the EPR Act can effectively address our solid waste problem. It is vital to have the voices of all sectors represented, as the sustained synergy of all stakeholders will be pivotal. With our planet struggling under the weight of over 7 billion tons of plastics, we must unite as one, leveraging and magnifying the ecological and economic gains achieved by individual companies and organizations.

Together, we can make a difference for the betterment of our people, our country, and our planet, by addressing the mismanagement of plastic waste and establishing sustainable solutions.

Let us now embark on this journey towards a greener, more sustainable future.

KEY TAKEAWAYS

Participants at the Department of Environment and Natural Resources (DENR) and Nestlé roundtable discussion on the Extended Producer Responsibility Act. May, 2023. Image: DENR

1 Better insights and strategies through data

Private sector stakeholders in the Philippines recognise the necessity of data-driven measures when implementing the Extended Producer Responsibility (EPR) Act. They emphasize the need for accurate and up-to-date data on post-consumer waste to effectively manage and improve recycling processes. By tracking such data, both relevant government agencies and enterprises can gain insights into waste generation, disposal patterns, and recycling rates, enabling them to develop targeted strategies and policies for improved waste management and recycling.

2 Success through increased collaboration

To ensure the successful implementation of circular economy programmes, stronger links between the private sector and public offices are needed. Collaborative efforts between industry players and government agencies can streamline processes, share expertise, and align goals, thereby enhancing the effectiveness of circular economy initiatives. By fostering this partnership, the private sector can contribute valuable insights and resources, while the government can provide necessary regulations and support.

Nestlé turns over the material recovery facility to their host community, Brgy. Bagong Pook, Lipa Image: Nestlé

A volunteer picks up waste at an ocean cleanup, 2022. Image: Nestlé

3 Formalising the informal sector

The government is encouraged to take a proactive role in catalysing and expediting circular economy programmes, as well as seeking investors to establish the country's mechanical and chemical recycling infrastructure. One particular focus is on mobilising and formalising the informal sector and materials recovery facilities. By providing support, guidance, and necessary resources, the government can empower these sectors to operate more efficiently, contribute to waste reduction and recycling efforts, and facilitate the transition towards a circular economy.

4 Enabling efficient waste sorting

Investing in infrastructure for solid waste management and recycling is vital for achieving a circular economy in the Philippines. Adequate facilities, such as waste collection centres, recycling plants, and material recovery facilities, need to be established and upgraded. This infrastructure will enable efficient sorting, processing, and recycling of waste materials, reducing dependence on landfills and promoting the circular flow of resources.

A volunteer segregates plastic waste. Image: Nestlé

Sec. Robert E.A. Borje, Climate Change Commission, joins an ocean plastic pollution cleanup campaign, 2022. Image: Nestlé

5 The importance of educating the public

An essential aspect of circularity is the need to educate Filipino consumers about its principles and encourage behavioural changes regarding waste handling and recycling. Public awareness campaigns, educational initiatives, and community outreach programmes can play a significant role in informing the public about the benefits of a circular economy and motivating them to adopt eco-friendly habits. This education should emphasize responsible consumption, waste reduction, proper waste segregation, and the importance of recycling.

6 The need to align stakeholders

Collaboration among multiple stakeholders is crucial for the effective implementation of the EPR Act and the transition to a circular economy. This collaboration involves government agencies, private sector stakeholders, civil society organizations, waste management companies, and consumers. By working together, these stakeholders can pool their resources, knowledge, and expertise to develop comprehensive strategies, establish effective recycling systems, and promote sustainable consumption and waste management practices.

Participants discuss challenges and opportunities in the circular economy at the multi-stakeholder dialogue on the EPR Act. May, 2023. Image: Nestlé

CAUTION
CAUTION

EXECUTIVE SUMMARY

Filipinos consumed 2.15 million tonnes of plastic in 2019. Of this, only around 9 per cent were recycled, with 33 per cent being sent to sanitary landfills and open dumpsites. The other 760,000 tonnes of mismanaged plastic leaked into the open environment.

"We stand at a crossroads," said secretary Ma. Antonia "Toni" Yulo-Loyzaga of the Department of Environment and Natural Resources (DENR) during her opening remarks at the Rethinking Plastics: EPR Paving the Way Towards Circularity forum, which took place in May 2023.

"We can continue with our current patterns of consumption and waste generation, or we can choose a different journey – a path that leads to a cleaner, healthier, more livable planet. The choice is ours and we must act now."

Co-presented by Nestlé Philippines and the DENR – and organised by Eco-Business – the Rethinking Plastics: EPR Paving the Way Towards Circularity series of dialogues aims to spur conversation about the Philippines' staggering waste problem and how the Extended Producer Responsibility (EPR) Act of 2022 can be a roadmap to a genuine circular plastic economy in the country.

It aims to show obliged enterprises, waste diverters and other stakeholders that the implementation of an EPR scheme is feasible. Eco-Business was given access to report on the roundtable discussions.

"This gathering of industry and policy leaders, as well as innovators, and waste management ecosystem players, [is] crucially important to the success of the EPR [law]," continued Yulo-Loyzaga.

"We need to discuss and agree on key processes… as well as strategic alliances that we need to enforce [to] enable the country to stop packaging pollution by adopting a course towards circular economy."

> We can continue with our current patterns of consumption and waste generation, or we can choose a different journey – a path that leads to a cleaner, healthier, more livable planet. The choice is ours and we must act now.
>
> Sec. Maria Antonia Yulo-Loyzaga,
> Department of Environment and Natural Resources

Reduce and recover

Amending the Philippines' Ecological Solid Waste Management Act of 2000, the EPR Act institutionalises the extended producer responsibility of large-scale enterprises, effectively mandating plastic packaging producers to assume full responsibility for the entire life cycle of their products, including waste management, by recovering 80 per cent of their annual plastic packaging waste by 2028.

Ahead of the EPR Act rollout, Nestlé Philippines had already voluntarily transitioned to be fully plastic-neutral by successfully recovering over 64.5 million kg of plastic waste from August 2020 to December 2022, equivalent to the volume of plastic packaging it put out in the market in the last two years.

With a pledge to have 95 per cent of its packaging designed and optimised for reuse or recycling by 2025, and plans to cut its use of virgin plastics by a third by the same year, Nestlé Philippines hopes to lead the transition into circularity in the Philippines. With large-scale packaging producers and obliged enterprises required to recover at least 20 per cent of their plastic footprint by the end of the year, the gaps in the Philippines' recycling infrastructure and ecosystem have become increasingly apparent.

Private sector stakeholders have drawn attention to the country's heavy reliance on the informal waste sector, the disproportionate number of material recovery facilities (MRFs) in key cities amid rapidly increasing solid waste output, as well as limited service providers in the mechanical and chemical recycling space, among others.

Roadblocks and barriers

The Philippines – an archipelagic country of more than 2,000 inhabited islands – lacks not only adequate waste management infrastructure but also the logistical capability to integrate a recycling ecosystem that can reduce its daily garbage output.

To illustrate, only 245 sanitary landfills are operational in the Philippines, according to 2021 data from the National Solid Waste Management Commission (NSWMC). Equipped to process only 15 tonnes of garbage per day, sanitary landfills can only service 478 out of 1,634 of the country's municipalities. Based on estimates by the NSWMC, the Philippines' waste generation is expected to reach 23.6 million tons annually by 2025.

These deficiencies are allowing some 0.75 million metric tonnes of mismanaged plastic to enter the ocean every year from the Philippines' rivers, making the country the third-worst plastic polluter globally, after China and Indonesia. "Key challenges in the Philippines [include] the inconsistent implementation of waste segregation and waste diversion, wherein the significant presence of mixed wastes was found in landfills," according to a government audit.

Meanwhile, municipal solid waste in the Philippines reached 15.8 million tonnes in 2019 according to a World Bank report, with the financial institution estimating that the annual solid waste total could reach 20 million tonnes by 2030.

Sachet economy

The country's solid waste problem is further exacerbated by Filipino consumers' demand for single-use flexible packaging on a daily basis.

With 18 per cent of the population – or almost 20 million Filipino families – living below the poverty line, the Philippines has been labelled a "sachet economy" due to its consumers' dependence on palm-sized pouches for prime commodities such as shampoos and seasoning, given their means to afford basic necessities in only small quantities to make ends meet day to day.

It is estimated that some 164 million sachets are used in the Philippines every day, which equates to around 59.7 billion sachets annually. The Philippines surpasses its Southeast Asian neighbours in terms of sachet use, with single-use flexibles constituting 61 per cent of plastic units consumed in the country, compared to Thailand's 37 per cent.

At the roundtable, producers in the fast-moving consumer goods (FMCG) industry – acknowledged that although recycling is not their enterprises' key strength, they have made some strides through initiatives launched before the enactment of the EPR law.

An FMCG representative in the personal care space highlighted plans to introduce 25 per cent post-consumer recyclate (PCR) to its packaging.

However, the company conceded that the local ecosystem for the production of PCR in the Philippines remains severely limited. To discourage the use of single-use plastics, the consumer goods company is also considering the rollout of mobile refill stations to bring the replenishment of commodities directly to the consumers' homes.

Inclusion of the informal sector

In the Philippines and most other Southeast Asian countries, the informal sector is the unsung hero of the solid waste management ecosystem. MRFs and wastepickers are responsible for more than 90 per cent of the collected-for-recycling (CFR) rates of polyethylene terephthalate (PET), the material used to make plastic bottles, in the region.

With the implementation of the EPR Act, the DENR recognises the segment's vital role and is mulling programmes to formally include and develop the underserved stakeholders' contribution to the circular economy.

"Collection and sorting facilities from the informal sector may be transformed into formal activities and establishments. These can be duly registered and supported by the EPR system," Yulo-Loyzaga said.

A large chunk of the 525,000 tonnes of plastic waste recovered and consolidated for recycling in the Philippines in 2019 was processed by waste pickers and primary collectors. Of this, 27,000 tonnes of plastics were retrieved directly from disposal sites by the informal sector, while 175,000 tonnes were processed via MRFs.

A National Solid Waste Management Status report noted that some local government units have already begun to recognise how the informal and semi-formal sectors contribute to diverting wastes away from disposal sites, and have explored ways of partnering with them.

The nation's capital, Manila, suffers from a lack of infrastructure required to properly dispose of or recycle waste,

leading to some 33,000 cubic metres of waste collected every day by local government units, according to the Metropolitan Manila Development Authority. This translates to a collection rate of just 60 per cent, which is low compared to Indonesia (74 per cent) and Thailand (81 per cent).

"Waste pickers are good waste diverters since they can recover a lot of recyclable wastes, at no cost to the government," according to a 2020 paper by the WWF.

"[However], they [are also the] most vulnerable sector and are generally part of the informal waste sector. In many areas, waste picking is not allowed in the streets and in dumpsites. They are usually not formally organised and work individually or as families."

However, the social development and formalisation of the segment are in the agency's sights, assured Yulo-Loyzaga.

"The informal sector can also be integrated as business partners, such as non-governmental organisation (NGO)-supported microenterprises, franchises of formal waste management companies, operating local collection centres, and forming cooperatives and collectives," added secretary Yulo-Loyzaga. "This social inclusion can be improved to develop alternative livelihoods and diversified livelihoods for our informal community."

Recycling capability

Jose Uy III, SVP and head of corporate affairs at Nestlé Philippines, highlighted the pressing need for waste recovery and recycling infrastructure in the Philippines, noting that even if they design and optimise their packaging for reuse and recycling, the country would not achieve circularity without the proper ecosystem.

The Philippines recycles only about 28 per cent of its key plastic resins, according to a 2021 study by the World Bank. As a result, the Philippine economy loses around 78 per cent of the material value of its plastics supply chain every year. In achieving circularity, the Philippines could unlock some US$1.1 billion annually in material value.

During the roundtable discussions, an environmental sustainability representative underscored that multi-layer plastic packagings like sachets and tetra packs are difficult to recycle without adequate facilities or capabilities to separate all its components. They urged large manufacturers to reconsider mono-material plastics or other plastic alternatives to make the recovery and reuse of the material easier.

However, FMCG leaders at the roundtable underscored that the country still lacks the mechanical and chemical recycling facilities needed to produce recycled food-grade packaging, which is packaging designed to protect and preserve food products while also ensuring that they are safe for consumption. They also noted that the upcycling rate in existing facilities remains slow. As the manufacturers require more scale, the infrastructure is vital for expansion.

In a DENR survey between 2013 and 2014, the agency only tracked three types of plastics out of the seven in circulation in the Philippine market. These three were PET, high-density polyethylene (HDPE) and polyvinyl chloride (PVC). The remaining plastics were usually lumped with other inorganic materials as residual waste due to a lack of recycling capacity.

"The Philippines has a large recycling capacity gap of 85 per cent (compared to Malaysia's 58 per cent and Thailand's 27 per cent) and is a net exporter of plastic scrap," noted a report.

A representative from a private business council highlighted that their organisation's upcycling and reuse operations now have the capacity to reuse and recycle recovered polystyrene plastic into rulers, chairs, traffic cones, parking barriers and even insulation and drywall, among others. However, they acknowledged that their recycling operations and reach remain limited.

> There is a pressing need for waste recovery and recycling infrastructure in the Philippines. Even if we design packaging for reuse and recycling, the country would not achieve circularity without the proper ecosystem.
>
> **Jose Uy III,**
> SVP and Head of Corporate Affairs, Nestlé Philippines

KEY RECOMMENDATIONS

Uy, emphasized the importance of collaboration in finding solutions to the global issue of plastic waste mismanagement. “The operative word is collaboration.

The mismanagement of plastic waste is a global issue. It is through collaboration that we will find solutions to the problem that we face,” he said.

“This [forum] is [the beginning of that] collaboration, where we bring together policymakers, business leaders, relevant government agencies and global changemakers. This is where we discuss how we can work together to advance and transition to accelerate circularity.”

Yulo-Loyzaga agreed, noting that the biggest challenge lies in education and in changing people’s behaviours. “It is not solely on the large producers. [On the other hand], how we treat plastics is a matter of chemistry,” she highlighted. “There needs to be an investment in research for recycling and upcycling. We cannot stay with today’s state of science and technology.”

National Solid Waste Management Commission vice chair Crispian Lao similarly stressed the need for innovation and development, while also acknowledging that the informal sector needs to be included and empowered.

> There needs to be an investment in research for recycling and upcycling. We cannot stay with today’s state of science and technology.
>
> **Sec. Maria Antonia Yulo-Loyzaga,**
> Department of Environment and Natural Resources

“Technology is available globally to address plastic waste. The big question [however] is what kind of technology is applicable for us in this country, and what will support a recovery system that is dominated by the informal waste sector,” Lao said.

“We have to focus on recovery and on the resources we have now, rather than reinventing [the wheel]. We have to build upon the infrastructure of our informal waste system, and try to formalise and develop key individuals into entrepreneurs.” With the EPR Act implementation in its early stages, private stakeholders and obliged enterprises must be involved, highlighted Atty. Annaliza Rebuelta-Teh, undersecretary, the Department of Environment and Natural Resources.

“The EPR implementation requires a lot of resources… [and] private sector participation is vital. Based on data from the Environmental Management Bureau (EMB), right now [only] about 16 per cent of the obliged enterprises have registered under the EPR Act,” Rebuelta-Teh said.

“We need the support of the private sector to make sure that this law will be successfully implemented. The challenge is how we can sustain this initiative and strengthen our collaboration to address all the different aspects of the implementation of the EPR.”

Celebrating World Oceans Day through a simultaneous dive and beach cleanup with Nestlé employee volunteers. Image: Nestlé

> We have to build upon the infrastructure of our informal waste system, and try to formalise and develop key individuals into entrepreneurs.
>
> **Crispian Lao,**
> Vice Chair, National Solid Waste Management

Both the plenary and roundtable discussions highlighted key voices in the rollout and implementation of the EPR Act, each underscoring the crossroads the country now faces and how the industry could support the Philippine government in overcoming any anticipated challenges. Some of the recurring pain points and recommendations from the dialogues were:

The need for data-driven EPR

Private sector stakeholders highlighted that gaps remain when it comes to public recovery and recycling data, noting that for the EPR Act to succeed, its impact needs to be measurable and data-driven.

Industry players currently rely on their own manufacturing data but underscored the importance of relevant government agencies keeping track of post-consumer data, such as the origin and destination of rubbish. Representatives from the DENR acknowledged these deficiencies, assuring that they are working on an EPR database that will hopefully foster and develop the digital infrastructure for traceability.

Stronger links

With the enactment of the EPR Act, industry stakeholders hope that the DENR will lead the creation of stronger links between the private sector and relevant public offices, and, in turn, a seamless implementation of circular economy programmes. Among the suggestions was connecting firms to local government units and their partner MRFs to facilitate cooperation when it comes to solid waste management and recovery.

Enterprises also urged the DENR to link them with the Department of Science and Technology for the research and development of technology and innovation, as well as the Department of Trade and Industry for business incentives.

Investing in the informal sector

Private stakeholders are encouraging the government to catalyse and fast-track its programmes to mobilise and formalise the informal and MRF sector. Aside from livelihood and welfare programmes, government agencies need to consider rolling out upskilling and capacity-building projects in the largely underserved segment. It will be key for individuals in the marginalised manual segregation and informal waste pickers sector to be empowered and better equipped to contribute to circularity.

Reducing our plastic footprint

The pressing need to educate Filipino consumers on circularity also remains a hot-button issue. Both the government and producers acknowledge the need to inspire behavioural changes in how end-users handle waste – especially consumer goods packaging at the end of its life cycle. As enterprises pledge to reduce their plastic production, awareness campaigns also need to be launched by both the public and private sectors to educate the basic Filipino consumer to avoid littering, foster a recycling mindset and embrace waste segregation at home, as well be part of the circular economy solution.

LET'S TALK ABOUT PLASTICS

Given the Philippines' complex plastic ecosystem, the cooperation of multiple stakeholders will be key to effective implementation. The enactment of the EPR Act and the increase in calls to implement a circular economy model also signify a promising beginning towards a more sustainable future for the country.

The inaugural Rethinking Plastics: EPR Paving the Way Towards Circularity forum aims to spur dialogue and an exchange of ideas on how to navigate EPR Act mandates, and involve industry stakeholders in shaping the role of the private sector in the circular economy. Post-event roadshows will also be held in other key cities in the archipelago in the coming months to raise awareness and encourage compliance with the EPR Act, supporting the implementation of a circular economy model.

The forum gathered some 300 online and offline participants and key opinion leaders from think tanks and at least 40 companies – predominantly in the fast-moving consumer goods (FMCG) space – alongside public sector representatives from relevant Philippine agencies and both Houses of Congress, as well as officials from various civil society and non-governmental organisations and business groups.

The panel discussion and subsequent breakout roundtable dialogues involved prime industry stakeholders in conceptualising innovative and effective circularity practices to support the government in its implementation of the EPR Act, with the vision spurring pivotal government-industry collaborations to implement and measure the impact of the landmark legislation, as well as build the foundation for a circular economy approach to waste management in the country.


INNOVATE

LOOKING OUTWARD

The nation can also refer to how other countries have benefitted from the EPR Act, including Norway, South Korea and India.

For example, the Norwegian Retailers' Environment Fund joined forces with the United Nations Environment Programme (UNEP) to enhance global and national capacity to develop, implement and integrate EPR approaches for plastic products. The collaboration also seeks to establish EPR guidelines, operation manuals and toolkits to ensure harmonised EPR implementation.

In South Korea, EPR has been mandatory for various items including plastic packaging since 2000.

Performance rates of plastic packaging for recycling obligations have continued to exceed 100 per cent annually, according to a UNEP report. South Korea also boasts one of the highest overall recycling rates in the world at 86 per cent, according to the nation's Ministry of Environment, as a result of strict household waste segregation measures and the use of innovative radio-frequency identification technology to track the collection of rubbish.

Here are other some other ways South Korea's EPR system ensures product manufacturers collect and recycle the wastes derived from their products:

1. Producers subject to recycling obligations have the choice to either directly engage in recycling, partner with recycling businesses, or participate in a cooperative initiative like the Korea Waste Recycling Mutual Aid Association;
2. The Korea Environment Corporation ensures regulatory adherence by mandating both producers and importers to report their sales and import figures in detail. Enterprises are also required to furnish comprehensive data concerning the quantity of waste they collect and subsequently recycle; and
3. Producers and importers of goods, materials, and containers that pose recycling challenges, such as pesticides, hazardous chemicals, anti-freeze solutions, chewing gum, disposable diapers, cigarettes, as well as specific plastic products that fall outside the EPR framework, such as polyvinyl chloride pipes, toys, and kitchenware, are subject to an Advance Disposal Fee.

Prior to the EPR, municipalities in South Korea were already responsible for waste collection, recycling and treatment under its Volume Based Waste Fee system, which was introduced in 1995 to reduce waste and encourage recycling. Households and businesses were also required to use designated bags to dispose of refuse. The system superseded a fixed-fee system, where households paid a consistent fee regardless of waste amount.

The country's Ministry of Environment estimates that its successful EPR implementation has enabled the country to save some US$2.2 million in landfill expenses while generating US$2.3 million in earnings from the sale of recycled goods and materials. Close to 10,000 new jobs have also been created by the nation's burgeoning circularity ecosystem in the last decade.

Since South Korea's initial EPR rollout, the government has pledged to help steer the country's producers and consumers to reduce all plastic waste by at least 50 per cent by 2030 – banking on comprehensive measures to strengthen its public waste collection infrastructure and stabilising its recycling market. Indeed, South Korea began banning the production of coloured plastic bottles in 2020, due to challenges in removing their pigments during the recycling process.

Meanwhile, India's EPR began as a way to manage the country's staggering electronic waste problem but has since expanded to include other waste streams including plastic packaging. The EPR regulation covers not only importers and producers but online platforms, supermarkets and retail chains as well. Some 12,073 entities are now registered on India's centralised EPR portal as of April 2023 with the number expected to grow as more waste streams are added.

CONCLUSION

How successful the implementation of an EPR scheme in the Philippines will depend on multi-sector participation and engagement.

As public waste management infrastructure remains inadequate, coupled with the large recycling capacity gap, government officials and industry leaders alike at the roundtable agreed that the business sector and the administration will have to support each other in laying the ground for EPR implementation.

The informal sector must also be included. While some local government units have come to recognise their contribution, it remains to be seen how the EPR Act will mobilise the largely poverty-stricken sector.

In addition to this, Filipino consumers need to be made more aware of the environmental cost of littering and pollution, to start the change in the household and spur more citizens to take waste segregation seriously and be part of the solution in the circular economy.

The nation faces a pressing need to address plastic waste management, improve recycling capabilities, and invest in infrastructure to combat the growing environmental and health risks associated with plastic pollution.

Collaboration plays a crucial role in driving progress and collective action in EPR schemes. By bringing together key stakeholder groups, collaboration can foster a comprehensive and holistic approach to address the various challenges posed by plastic waste.

Evidently, collaboration is instrumental. By working together, stakeholders can make significant strides in creating a sustainable circular economy for plastics and mitigating the environmental impacts associated with plastic waste.

“Waste management has links to public health, water, food, energy security, climate action, and disaster risk reduction,” concluded DENR’s Yulo-Loyzaga. “As our planet continues to bear the weight of more than 8.3 billion tons of plastics, we need to come together as an alliance to ensure that the ecological and economic gains as individuals, companies and organisations are leveraged and magnified for the good of our people, our country, and our planet.”

“The nation faces a pressing need to address plastic waste management, improve recycling capabilities, and invest in infrastructure to combat the growing environmental and health risks associated with plastic pollution.”

About Eco-Business

Eco-Business is the leading media and business intelligence company serving Asia-Pacific's sustainable development community. Our platforms include the award-winning Eco-Business site, custom publications, research and high-impact bespoke events catered to deepen discussions on sustainability. "Rethinking plastics: How the Extended Producer Responsibility Act will pave the way towards circularity in the Philippines" is a synthesis report written and produced by Eco-Business editorial team and supported by Nestlé Philippines, Inc. (hereafter referred to as Nestlé).

Credits

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Limitations

This report has potential limitations with regard to its research and methodology. It uses primary sources from the roundtable discussions held under Chatham House Rules with over 180 in-person participants who are senior representatives from policy, business, and civic society organisations. The report is complemented with secondary sources available in the public domain. Any EPR policy-related updates that were released after July 28, 2023, have not been included in the report.

ANNEXES

Annex 1
Agenda

1:00 pm	Opening **Ping Manongdo** Country Director Philippines and Assistant Director, Partnerships, Eco-Business
1:10 pm	Welcome remarks **Ma. Antonia "Toni" Yulo-Loyzaga** Secretary, Department of Environment
1:20 pm	Opening keynote **Atty. Jonas R. Leones, CESO I** Undersecretary, Department of Environment and Natural Resources
1:35 pm	Panel discussion Rethinking Plastics: EPR paving the way towards circularity **Atty. Annaliza Rebuelta-Teh** Undersecretary, Department of Environment and Natural Resources **Jose Uy III** Head of Corporate Affairs, Nestlé Philippines **Crispian Lao** Vice Chair, National Solid Waste Management Commission **Michikazu Kojima** Senior Adviser to the President on Environmental Issues, Regional Knowledge Centre for Marine Plastic Debris, Economic Research Institute for ASEAN and East Asia (ERIA)
2:35 pm	Roundtable discussions RTD No. 1: Comply and Integrate – identifying potential challenges and how stakeholder engagement and integration will form part of the solution RTD No. 2: Innovate – the quest for innovative solutions for EPR programmes RTD No. 3: Collaborate – exploring joint industry-government collaborations to support the EPR
3:35 pm	Sharing of RTD discussion highlights
4:05 pm	Interactive Q&A session
4:30 pm	Closing remarks **Kais Marzouki** Chairman and CEO, Nestlé Philippines

Annex 2.1

Rethinking Plastics

| EPR paving the way towards circularity Roundtable Discussion

Track: Innovate – the quest for innovative solutions for EPR programmes

DATE AND TIME	10 May 2023 1 pm to 5 pm		
ATTENDEES	Rondell Torres	Sustainability Lead	Unilever
	Dianne Patawaran	Stakeholder Relations Assoc. Manager	Coca-Cola
	Darryl Uy	Regulatory	Nestlé
	Denvert C Pangayao, PhD	Supervising Science Research Specialist Head, Waste Management Section Environment and Biotechnology Division	DOST ITDI
	Rachel Anne Herrera	Commissioner	Climate Change Commission
	Angela Edralin	Director	Ecoloop, Republic Cement
	Miggo Bautista	Sustainability Manager	Nestlé
	Rommel Benig	Founder	Green Antz
	Rowell Penaflor	Plant Leader	Cemex
	Christer Gaudiano	Sustainability director	Cemex
	Joel Palma	Country Director	USAID Clean Cities Blue Oceans Program
	Annaliza Rebuelta-Teh	Undersecretary	DENR
KEY DISCUSSION NOTES	ITEMS DISCUSSED Question: Some have said the EPR Act only requires producers of plastic waste to collect and recycle plastic packaging waste, without holding companies accountable for reducing the production and use of plastic. Moving forward, should these large enterprises also be mandated to adopt innovative ways to minimise their plastic production? Environmental sustainability representative: • EPR law applies to both upstream and downstream. Upstream refers to reduction (of waste) which includes designing materials for recyclability. EPR law in the Philippines turned out to be a bit more flexible, leaves a lot of options for the private sector to both reduce (the use of) and recycle the materials. It is embedded in the policy, it is a matter of translating what exactly circularity means to each and every company, not everything will be applicable to everyone. • Innovative ideas for upstream: Shift from multi-material to mono-material. Alternatives are always controversial, one needs to be sure that the alternative proposed is better than what it is replacing. Policies may be reviewed, for example, on RPET applications on food packaging.		

KEY DISCUSSION NOTES	FMCG representative: • Coca Cola launched its first ever bottled water made from recycled plastic bottle, Viva, this year the company will be lauching more product SKU using RPET. The Coca Cola Philippines went ahead with this following regulations from European countries (where Coke has a presence) even though there is no law requirement, no law here yet. Coke is using what it has learned from other jurisdictions and applying those in the Philippines.
	FMCG representative: • The company is moving to introduce up to 25% PCR – post-consumer recyclate to its packaging. There is a strong case for it as Unilever has started applying it for its home-care product range. Local source of PCR though is very limited. The company is entering into a joint venture to increase the supply of PCR. • Get the brilliant basics right. Leaning into household segregation. Before we recycle we have to collect, that has been the challenge of partners in waste and recycling sectors. • Low-tech brilliant basics would be about helping shift consumer perception about packaging. Consumers would demand packaging that is perfectly white, versus, as allowed by FDA, as allowed by regulations, slightly grey packaging from recycled material. Imperfect packaging using PCR that's the learning we had using Surf bottles. It doesn't look the same. We could do away with optics. Greige – Grey and Beige – we will never get the perfect white from virgin materials. • Roving refill stations. Helping move the openness towards retail-based systems. Experience in South America about refilling trucks – in-store, in-home, and to-home. There are some consumers who cannot go to sari-sari store, they can only refill at home, but that encourages re-use, that's where our waste partners should come in. Business case positive, lays the ground work for a lot of these things to flourish. Retail sector is itching for this, we need to build the win-win scenario for all.
	On household behavioral change needed to be truly circular: Environmental sustainability representative: • Biggest finding of a study shows that no pressure is needed for households to practice waste segregation. Form follows function. If I live in a barangay or a city that has a structure or a system, and is consistent, and that waste is not mixed up after households have segregated them, form follows function. Awareness is one thing, but the system has to be in place. • LGU has to have the infrastructure. Even if households have segregated but there is no MRF, or plastic waste storage facilities, then nothing will happen. • EPR presents the opportunity, because there is a demand, and there is a market for waste. • Even if you make people aware, we will not see things happening if there is no structured system. We don't have to know, we just have to follow.
	Government agency representative: • Sustainability is not just about recyclability but reusability. This is not a new idea to Filipinos. People buy PET drinks and then refill it with water. Not a new idea. It's a matter of embedding it in everyday lifestyle. • If we want a sturdier packaging, how do we make the regular consumers able to afford it? We have to think about circularity as a whole picture – involves society, environment, and economy • When systems are in place and regular Filipinos follow, then we can make things happen. • It is a question of establishing the basics. Germany has PET bottles that people put into recycling pods and where consumers get money. • Attach it to culture. How do you keep Manila or the entire PH beautiful?
	FMCG representative: • Property managers of condominiums should be made part of the whole movement, create a system for this space. If one unit will not be able to segregate, then the PM will not collect it or penalise the condo unit owner.
	Question on how to make the industry, large corporations, OEs, can be helped to submit their EPR programmes. What are some of the innovative ways to help OEs prepare and submit EPR programmes:

	Environmental sustainability representative: • Surprised about the low turn-out. Large enterprises know they have a target to meet.
	Government agency representative: • DENR is already trying to promote / raise awareness on the PROs that applied. The number of the OEs that will submit will increase.
	FMCG representative • If you don't have the resources to prepare the plan, it will be a challenge. We could create a checklist – and the large enterprises can just check or tick on it. It makes it easy for the regulators to review and approve as well. Menu, templates, examples, checklist could help. Digitise it, submit online.
	FMCG representative: • Pattern after certificate of product registration, tick box, and then attach supporting documents.
	FMCG representative: • There could be an opportunity for data sharing, DENR could tap DTI database for large enterprise so they could focus on the real work
	Government agency representative • There supposed to be a reply – acceptance of the application. We are really looking at establishing the system. The EMB is not that ready yet. Maraming contractuals – we need other support to set up the system. Initial proposal on the registration. EPR program to make it review as a basis for decision making. But if there are limitations for the OEs, we can do a check list. Baka walang meaning if this way, paano to measure that the enterprise participated in the clean up in Barangay. It would be hard to measure for compliance. We can start developing capacities both in private sector and government and then enhance later on. • On data sharing – we acknowledge this. EMB is already advance in the database that's why we are able to monitor air quality real time. We are tapping expertise to develop that system. Maybe we can have technical committees, private sector and government, infrastructure, technology, to develop the EPR program even the database management to help government improve governance and help private sector comply. Let's involve DOST for innovation and technology, DTI for data sharing.
	FMCG representative: • On the standard of measurement, it could be KPI but not prescriptive, metric tonnage of collected waste, etc. for georgraphically relevant solutions and performance indicators, compliance ease but robust. We can zero in – for example for a clean up. Ako OE babantayan ko metric tonnage ko. Not on publishing a tarp to announce the clean up but on actual output. We start with one end in mind. • What may be applicable in one location may not be applicable in another location.
	Global sustainability representative: • We're in the initial stage. We want to keep it open, performance measures very important • UNDP is establishing an EPR registry. Now submission is manual. But by June could be done online. Private sector could be involved in the process, to ensure it is catering to needs and cyber-attack ready
	Government agency representative: Going back to FDA, only one account for the company
	Eco-Business: Is there going to be a tracker for the waste collection/recovery effort? Where is it going to be verified against? Usec Teh: System of audit – third party. Iba iba ang gustong gawin, so the measurement is different. Mag hihire ng taga retrieve ang iba, so that system is complicated. January 2024 is the reporting and measurement of the compliance is December 2023. We are looking at amending the IRR – we will see how we can be flexible in this. We are moving in that direction, kesa naman maglokohan tayo.

KEY DISCUSSION NOTES	Cement producer representative on auditing collection efforts: • Is there a science to waste characteristics? Waste percentage for rigid, waste percentage for flexibles. Because it is almost impossible to separate
	Government agency representative: • Provided in the law, not really to circumvent
	FMCG representative: • What is in the law is balanced already. I am more comfortable with general form as it is written, alternative is to do by weight. If opt to buy all rigids, nobody will buy flex. What is the incentive for the flex collection to happen. This EPR law valorised the problematic waste.
	Cement producer representative: • Segregate at source. Pet bottle is bottle, cap is rigid. Must separate.

Annex 2.1

Rethinking Plastics

| EPR paving the way towards circularity Roundtable Discussion

Track: Collaborate – exploring joint industry-government collaborations to support the EPR

DATE AND TIME	10 May 2023 1 pm to 5 pm		
ATTENDEES	Reynaldo Lignes	Acting Director	DTI BOI MIS
	June Villasanta	Supervising investment specialist	DTI BOI MIS
	Joey Uy	SVP & Corporate Affairs Head	Nestlé
	Ayako Mizuno	Programme Manager	ERIA
	Sophia Ordona	Associate Director for Government and International Affairs	European Chamber of Commerce of the Philippines
	Rita Imelda Palabyab	President	Philippine Chamber of Food Manufacturers Inc.
	Christine Garcia	Sustainability Lead	Nestlé
	Crispian Lao	Founding President	PARMS
	Lavin		Unilever
	Steve Piczon	Sustainability director	Cemex
	Juan Miguel Cuna	Undersecretary	DENR
	Gilbert Gonzales	Assistant Secretary	DENR EMB

KEY DISCUSSION NOTES	ITEMS DISCUSSED QUESTION: With the implementation of the EPR Act, what is the outlook of the private sector when comes to the need to now invest in their own establishing commercial or industrial waste diversion or disposal facilities? Government agency representative: • The EPR law is an industry-centred piece of legislation. A lot of the technology and innovation will have to be shouldered by the public sector. What the government can do is ensure the effective implementation of the legislation.
	FMCG representative: • Our company has made significant steps in becoming plasti neutral. What is important now is how we can accelerate the Philippines becoming a circular economy, with the EPR law. • One of the biggest problems is a lack of infrastructure. Even if our company shifts most of its packaging to recyclables, without the proper infrastructure, then we will not be able to achieve circularity. We need to be able to work with government agencies like the Department of Science and Technology, the Board of Investment and the Department of Environment and Natural Resources, among others,to be able to address this. • The Philippines is one of the largest plastic polluters in the world, we hope government agencies and help us develop solutions and innovations, like a recovery and chemical recycling infrastructure that would able to generate potentially energy from waste, especially in the country's island regions where the logistics is lacking. If we can convert these plastics to oil or energy that could be a sustainable solution. • The close collaboration of the government and the private sector is necessary with the implementation of the EPR law. If the right hand knows what the left hand is doing, it can prove effective to achieving circularity. If the DENR is implementing the EPR law, how then can agencies like the BOI and the Department of Trade and Industry contribute to support or even attract venture capitalists to put up the infrastructure we need to achieve circularity. • EPR is just the first step in the road to circularity, we need a country-wide game plan to achieve it.
	FMCG representative: • We are nowhere near where Nestlé is in achieving plastic neautrality. We are just starting out. For our initial 20 per cent recovery, we are investing in plastic credits, just to be sure that we comply with the end-of-year EPR deadline. It cost us millions of pesos, but we believe it is something vital we've had to do. It's an investment for the future. Plastic credits are just a way for us to buy time to implement and roll out our own plastic recovery and recycling initiatives. • At San Miguel, we've started to repurpose plastic in paving roads. When plastic is incorporated into asphalt it doesn't become polluting microplastics. However, even this innovation requires a lot of cooperation from different private companies, from the asphalt maker to the manufacturer.
	Business council representative: • The polystyrene industry is relatively smaller compared to the other plastic manufacturing industries in the Philippines, so recovery is relatively easier for us. • Recovery is something we've started years ago, working with the grassroot communities to recovery polystyrene from landfills. We are fortunate to have our own recycling industry. We have an offshoot company established in 2015 that is a polystyrene recycling corporation wherein we handle the post-consumer waste separately. • However, our post-processed plastic packaging are not food grade. For now we've been recycling plastics into rulers, traffic cones, parking barriers and chairs, among others. Fairly recently, we've also started producing insulation boards and drywall from our recovered and residual plastics. • Some of our upcycled products we give back to the communities adjacent to our waste recovery and recycling facilities. • We hope the DENR can help the private sector establish linkages and partnerships between the private sector and local government units for the establishment and support of more materials recovery facilities (MRFs) to improve the collection of plastics.

KEY DISCUSSION NOTES	NGO representative: • Our current solid waste management infrastructure is still based on the supply and demand on its services from two decades ago. The bulk of our plastic recovery ecosytem still relies on the informal waste pickers sector. A collaboration between the public and private sector is needed to swfitly address the gaps in our infrastructure. • There is a need to monitor our barangay and municipal waste management systems as an important aspect of measuring the true extent of our waste collection, as well as to empower the grassroots informal sector.
	Government agency representative: • When it comes to solid waste management systems, local governments are incentivised with Seal of Good Local Governance for exceptional implementation. There is room for private firms to also be incentivised for innovation and technology.
	FMCG representative: • At our company we admit that recyling is not our core competence. We are in food manufacturing and the works. Our preferred approach is to invest in venture funds to finance iniatives already in the areas of sustainability. We are able to provide funding or support to organisations that have ESG-focused areas, in line with our vision also. We are firm and open to cooperate as long as there is ESG data. • There are potentially a lot of fund in developing food-grade recycled plastic, if we can invest in this capability, we have a lot of room to grow.
	FMCG representative • Our expertise is in sales, manufacturing and marketing. It's not our expertise to build a recycling plant. In terms of investing, however, like most companies, Unilever has set aside funding for research and development into sustainable packaging, plastic alternative packaging.
	QUESTION: What could be some of the factors that could hold back the Philippines in achieving a truly achieving circular economy? What government-private sector partnerships can help alleviate these pain points? FMCG representative: • We don't have the ability to co-process plastic yet. Although our advantage is that we have cement and construction companies also under our auspices.
	FMCG representative: • Secretary Yulo emphasized a need for upcycling in her keynote. For us, for example, we take the recovered packaging from our Bear Brand products and upcycle them into chairs and tables that we then donate to school and communities. However, with upcycling the rate is slower. We want more scale. This is why the infrastructure is vital for expansion.
	Startup representative: • Recovery in the circular economy needs to be measurable and data driven. There is a need to invest in not only the physical infrastructure but also the digital and traceability infrastructure as well. • We need to be able to collect data on the origin of our garbage and where it is going. It's post-consumer data rather than the manufacturer's data. Manufacturing data is already accessible, its what happens to our packaging products after end-use that lacks traceability. • Optimistically we can hope that each household in the Philippines will be able to segregate their own trash in the near future. However, realistically it is the MRFs that will shoulder the recovery and waste segregation of our mixed wastes. Moving forward it's a question of investing in automated segregation or empowering those in the manual segregation and informal waste pickers sector.
	Government agency representative: • Admittedly it is the DENR who should shoulder this responsibility of collecting data and tracking our waste management systems. We have started building a database to put this traceability protocol in place.

Annex 2.3

Rethinking Plastics

| EPR paving the way towards circularity Roundtable Discussion

Track: Comply and Integrate – identifying potential challenges and how stakeholder engagement and integration will form part of the solution

DATE AND TIME	10 May 2023 1 pm to 5 pm		
ATTENDEES	Esperanza Sajul	Assistant Director	DENR
	Atty Carina Bayon	Chief Environment and Social Governance Officer	Pepsi Cola Products Philippines Inc.
	Mimi Malvar	Director of Government Relations and Country Legal Head	P&G
	Deegee Uy-Anastacio	Head of Government and Industry Affairs	Nestlé
	Raul Academia	Food Chamber Representative	Jollibee
	Joseph Fabul	Zone head	Unilever
	Armi Corpuz	Social Enterprise/NGO/Non Profit	Office of Sen Cynthia Villar
	Dilbert Quetulio	Committee SEcretary	House of Representatives
	Clarinda Mendoza	Committee SEcretary	Senate
	Xilca Protacio	Diretor	Pure Oceans
	Benjamin Villacorte	Partner	SGV
	Czarina Constantino Panopio	National Lead - No plastics in nature initiative	WWF PH
	Girlie Castelo	COS	Cong Len Alonte's office
	Atty Zoilio Andin	Consultant	UNDP
	Michikazu Kojima	Senior advisor to the president on environmental issues	ERIA
	Jonas Leones	Undersecretary	DENR
KEY DISCUSSION NOTES	ITEMS DISCUSSED • For the EPR law (RA11898), recovery is focused at the consumer level. "Your footprint is what you put in the market. Just answer the question: will it end up as post consumer waste? If the answer is yes, then it is covered." • For B2B companies – e.g., sugar mills that sell to wholesalers – they are governed by RA9003 and not RA11898.		

KEY DISCUSSION NOTES	• For mixed business models, they would be governed by both – the part of the business that sells to consumers, supermarkets would be governed by EPR and the part of the business that sells to businesses would be governed by 9003. • How are importers covered? First is to consider the definition of importer under EPR. Those that import – whether in original packaging or for repackaging – for distribution to the general public are covered by EPR. Those that aren't would be covered by 9003. • For most importers, majority of their assets would only be warehouse. However, if DENR and DOF are able to successfully enter into an agreement whereby the value of importation becomes the metric to determine whether an importer is an obliged enterprise under EPR/11898, then those whose total assets (including value of imported goods) exceed Php100 million would then be covered by EPR. If we do not use this formula, then they will not be covered. • There is some concern from companies, especially those in the B2B model, that while understanding here at the national level is clear that B2B companies are governed by 9003 and not 11898, implementation in the local/regional level may be different. Has the information been properly cascaded down the line? • In answer to this concern, this is why registration of EPR programs for now is at a central level. Also, the new EPR law (11898) did not entirely repeal the old 9003; they are meant to be complementary. They just have to say that they also recover, reuse, recycle but under 9003 and not 11898. • One key challenge is that there is no singular database of large enterprises nor a singular database of MSMEs. So it is hard to automatically classify which businesses are obliged and which are exempt. • For now, they are encouraging all businesses to register their EPR programs this year as until the end of 2023, there is no legal basis to sue for compliance. • Given the challenges of classification, government will also partly rely on "bulong brigade" - those companies that are in compliance of EPR can report to the agencies of any other companies or competitors who are not so that the government can issue a show cause to the offender. • For packaging manufacturers, the best way to do it is to first calculate total footprint, then deduct the footprint that was sold to obliged companies (e.g., sold to the likes of P&G, Unilever who are obliged). The remaining packaging that was sold to non-obliged enterprises will be the footprint of the packaging manufacturer. • Steps: 1) Know if you are obliged – 100m or above large enterprise; 2) Know what is your total footprint; 3) Determine how much of your footprint you need to recover. The net footprint is the one you have to adopt. • Government is encouraging for at least minimal compliance. If you are unsure whether you are covered or not, just register voluntarily and recover voluntarily. At least you have done due diligence on your side. • Certification for waste diverters is not yet possible / is challenging as it is currently difficult to track the waste end-to-end. The dealers / middlemen refuse to divulge information about where they source and where they sell to, as they are afraid to lose their business once people skip them as the middleman. • We are not looking at disposal credits because it runs contrary to the objectives of the brand owners who are responsible enough. • Some companies are suggesting that for waste recovered from fifth class municipalities, perhaps more credit may be given since it is costlier to remove waste in those areas and the EPR law is encouraging nationwide efforts (not just in metro areas like Metro Manila and Metro Cebu). • Some companies are asking if at least partial credits or other incentives may be provided for sustainable packaging vs current scenario where biodegradable, compostable and nonbiodegradable plastics are all lumped together; otherwise no one will invest in sustainable packaging anymore. • For companies - voluntarily register, even if you're unsure whether you're obliged. • For those who haven't registered yet, if they want they can adopt the EPR program of PARMS. They have already developed their EPR program which is very generic and may be copied/adopted. Then decide whether to execute on your own or hire somebody to do it for you. • DENR will be developing the credit system in the uniform standards by Sep 30. Suggestion of giving more credits to waste removed from fifth class municipalities may be considered here, as are other suggestions that may be made by organisations/companies. Companies are encouraged to submit proposals so that the government may evaluate. • Show cause may come out within the first quarter of 2024 based on audits.

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